

a first network segment having a plurality of stations, one of said stations sending a message packet onto said first network segment of a first format; said first format including a first header and a data field with network destination address in said communications network;

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a first network transfer device having an input connected to said first network segment to receive said message packet and having an output; the first network transfer device applying a second header to said message packet, said second header including a switching address translated from said destination address, said second header further including local status information and a plurality of status fields to indicate [said] a message packet servicing;

a switching device having a plurality of ports, a first of said ports being connected to said output of said first network transfer device; the switching device receiving said message packet with said second header and sending said message packet with said second header to a second port as selected by said switching address, and in response to said local status information and the plurality of status fields;

a second network transfer device having an input connected to said second of said ports of said switching device and having an output connected to a second network segment, the second network transfer device receiving said message packet via said switching device to forward to said second network segment; the second network transfer device removing said second header from said message packet.

10. (Two Times Amended) A method of operating a packet data communications network, the network including a first network segment having a plurality of stations and a second network segment having a plurality of stations, and including a switching device interconnecting said first and second segments, comprising the steps of:

sending from one of said stations of said first network segment a message packet of a first format onto said first network segment; said first format including a first header and a data field with a network destination address in said communications network;

receiving said message packet at a first network transfer device having an input connected to said first network segment; the first network transfer device applying a second header to said message packet, said second header including a switching address translated from said destination address, said second header further including local status information and a plurality of status fields to indicate [said] a message packet servicing;

receiving at said switching device said message packet with said second header and sending said message packet with said second header to a port of said switching device as selected by said switching address, and in response to said local status information and the plurality of status fields;

receiving said message packet at said second network transfer device via said switching device and forwarding said message packet to said second network segment; the second network transfer device removing said second header from said message packet.